Notice of Allowability	Application No.		Applicant(s)	
	10/620,472		ATOJI ET AL.	
	Examiner		Art Unit	
	Mark P. Francis		2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to _08/02/07_.

2. ☒ The allowed claim(s) is/are _1-5,7,9,11-16,18, and 20-25_.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

    Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Examiner's Amendment

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

2.   Authorization for this examiner's amendment was given by Mr. Josceyln G.

Cochburn, Reg. 27,069 on September 11, 2007.

3.   Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

The claims have been amended as following:

Listing of Claims

1. (Currently Amended) A method for ordered commands verification testing of a

multiprocessor computer system comprising multiple parallel processor threads,

comprising:

providing at least one rule for forming a legal ordered sequences of semaphore test commands;

forming a plurality of buckets of semaphore commands each comprising a plurality of the commands arranged in different sequentially ordered command sequences legal under the at least one rule;

randomly selecting, ordering and combining a plurality of the buckets in a sequential bucket test combination having a test sequential order, the sequential bucket test combination having an ordered composite test command sequence, wherein an order of any of the buckets relative to another of the buckets within the test sequential order may be changed within the test sequential order, the test sequential order legal under the at least one rule and thereby generating a predictable result when executed by the threads;

a semaphore manager sequentially distribution at least one of the composite test sequence commands to a first plurality of the processor threads in a first thread distribution; and

observing the performance of each of the first plurality of threads in response to the distributed test commands.

12. (Currently amended)   A verification testing system for a multiprocessor computer system comprising multiple parallel processor threads, comprising:

semaphore manager connected to the microprocessor and configured to rout ordered semaphore command instructions to the microprocessor threads; and

a memory device comprising a plurality of buckets of executable ordered semaphore test commands, each bucket comprising a plurality of the commands arranged in different sequentially order command sequences legal under at least one rule for forming a legal ordered sequences of semaphore commands;

the semaphore manager configured to combine buckets by randomly selecting the buckets and an order of the buckets within a sequential bucket test combination wherein an order of any of the buckets within a sequential bucket test combination wherein an order of any of the buckets relative to another of the buckets may be changed and the sequential test combination remain legal under the at least one rule and thereby generate a predictable result when executed by the threads; and

wherein the semaphore manager is configured to sequentially distribute at lest one of the composite test command sequence commands to a first plurality of the processor threads and observe the performance of each of the first plurality of threads.

20. (Currently Amended) An article of manufacture comprising a computer readable storage medium having a computer readable microprocessor semaphore manager program, wherein the semaphore manager program, when executed on a computer, causes the computer to:

form a plurality of buckets of ordered semaphore test commands each comprising a plurality of commands arranged in different sequentially order command sequences legal under at least one rule for forming a legal ordered sequence of semaphore test commands;

randomly select, order and combine a plurality of the buckets in a sequential bucket test combination having a test sequential order, the sequential bucket test combination having an ordered composite test command sequence, wherein an order of any of the buckets relative to another of the buckets within the test sequential order may be changed within the test sequential order, the test sequential order legal under the at least one rule, and thereby generate a predictable result when executed by the threads;

sequentially distribute at least one of the composite test sequence commands to a first plurality of multiprocessor computer system parallel processor threads in a first thread distribution; and

observe the performance of each of the first plurality of threads in response to the distributed test commands.

Correspondence Information

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark P. Francis whose telephone number is (571)272-7956. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T.An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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